THOMSON MULTI MEDIA

Brandt FERGUSON SABA TELEFUNKEN THOMSON

AUDIO

SERVICE MANUAL
DOCUMENTATION TECHNIQUE
TECHNISCHE DOKUMENTATION
DOCUMENTAZIONE TECNICA
DOCUMENTACION TECNICA

THOMSON

MS 2000
MS 2005
MS 2000G

Version (PC*): A

*PC: The version code is indicated either in the battery compartment or on the back of the unit - ce code version est indiqué dans le compartiment à piles ou au dos de l'appareil - PC: Version des Geräts wird im Batteriefach oder auf der Rückseite angegeben - il codice della versione è indicado nello scompartimento delle batterie o sul retro dell'apparecchio - el código de la versión está indicado en el compartimento de las pilas o en la parte trasera del aparato.

Technical data - Caractéristiques principales
Technische Daten - Dati tecnici - Caracteristicas del aparato

Type of set : **Type d'appareil :** **Geräteart :** **Tipo d'apparecchio :** **Tipo de aparato :**	Cassette radio recorder / compact disc Combiné radio cassette / CD CD-Radio Cassetten Portable Insieme radio cassette / CD Radio cassette / CD		310 mm ↕ 340 mm ↗ 370 mm 4,8 kg
Power supply : **Alimentation :** **Stromversorgung :** **Alimentazione :** **Alimentación :**	230 V ~	**Nominal output power :** **Puissance nominale de sortie :** **Nennausgangsleistung :** **potenza nominale di uscita :** **Potencia nominal de salida :**	2 x 40 W (Rms) 2 x 80 W (Music.)
FM - MF : **MW - PO :** **LW - GO :**	87,5 - 108 MHz 522 - 1611 kHz 150 - 283 kHz	**Sensitivity :** **Sensibilité :** **FM - MF :** **Empfindlichkeit :** **MW - PO :** **Sensibilità :** **LW - GO :** **Sensibilidad :**	8 µV (S/N = 26 dB) 1000 µV/m (S/N = 20 dB) 2500 µV/m (S/N = 20 dB)
Frequency response : **Courbe de réponse :** **Frequenzgang :** **Curva di risposta :** **Curva de respuesta :**	200 Hz - 4 kHz (+5 / - 5 dB)	**Signal to noise ratio :** **Rapport signal / brult :** **Geräuschspannungsabstand :** **Rapporto segnale / disturbo :** **Relación señal / ruido :**	42 dB
Wow and fluttter : **Fluctuations :** **Gleichlauf :** **Fluttuazioni :** **Fluctuaciones :**	0,3 %	→	4,75 cm/s C60 : 170 s
Disc rotation speed : **Vitesse de rotation du disque :** **CD-Drehgeschwindigkeit :** **Velocità di rotazione del disco :** **Velocidad de rotación del disco :**	200 ➡ 500 tr/m	**Frequency response :** **Courbe de réponse :** **Frequenzgang :** **Curva di risposta :** **Curva de respuesta :**	60 Hz - 20kHz (-3 dB)
Stereo separation : **Diaphonie :** **Übersprechdämpfung :** **Diafonia :** **Diafonía :**	40 dB	**Signal to noise ratio :** **Rapport signal / brult :** **Geräuschspannungsabstand :** **Rapporto segnale / disturbo :** **Relación señal / ruido :**	60 dB

WARNING : *Before servicing this chassis read the safety recommendations.*
ATTENTION : *Avant toute intervention sur ce châssis, lire les recommandations de sécurité.*
ACHTUNG : *Vor jedem Eingriff auf diesem Chassis, die Sicherheitsvorschriften lesen.*
ATTENZIONE : *Prima di intervenire sullo chassis, leggere le norme di sicurezza.*
IMPORTANTE : *Antes de cualquier intervención, leer las recomendaciones de seguridad.*

Code : 356 943 50 - 0703 / 3,7M - CRKD2558 Print.

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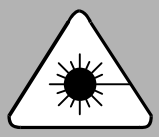


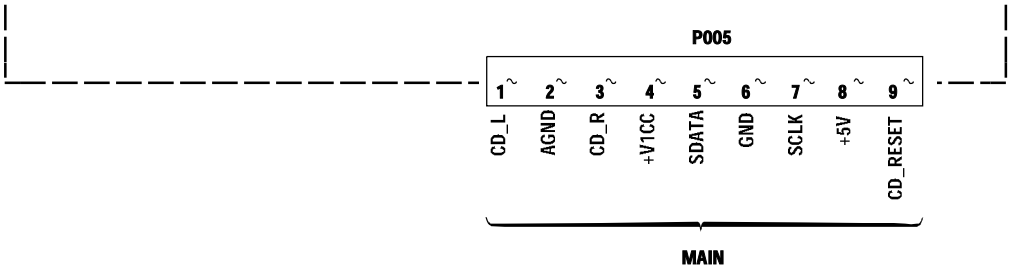
CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASER KLASSE 1
APPARECCHIO CON LASER DI CLASSE 1
APARATO CON LASER DE CLASE 1

DANGER :	**Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.**
ATTENTION :	**Le rayon laser est invisible. Eviter l'exposition directe lors de la maintenance.**
VORSICHT BEI REPARATUREN :	**Bei geöffneter Schublade und Defekt der Sicherheits-vorrichtungen besteht die Gefahr unsichtbaren Laserlichts. Niemals direkt in den Laserstrahl sehen.**
ATTENZIONE :	**Il raggio laser è invisible. Evitare l'esposizione diretta durante la manutenzione.**
IMPORTANTE :	**El rayo laser es invisible. Evitar la exposición directa en el momento del mantenimiento.**

DIGITAL PROCESSING SCHEMATIC DIAGRAM - SCHEMA DU TRAITEMENT DIGITAL - SCHALTBILD DIGITALVERARBEITUNG - SCHEMA ELABORAZIONE DIGITALE - ESQUEMA DEL TRATAMIENTO DIGITAL

The complete Digital Prcessing Module is available from A.S.S. under Part Number :
En SAV, l'ensemble du module traitement digital est géré sous le code :
Die Sevice Bestell-Nr. für das Modul "Digital Processing kompl." ist :
Il codice del modulo completo di elaborazione digitale è :
En postventa, el modulo completo tratamiento digital lleva el côdigo :

MS 2000 / MS 2005 : 107 508 10
MS 2000G : 107 468 60

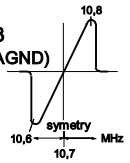


ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONI - AJUSTES

AM alignment

		Gf	f	10888 KHZ		V
MW Osc	1		522 kHz	522 kHz	TF003	TP002 V = 1,35V ±0,05V (TP009G = AGND)
	2		1611 kHz	1611 kHz		TP002 V = 8,0V ±1V
LW Osc	3		150 kHz	150 kHz	TF003	TP002 V = 1,51V ±0,1V
	4		283 kHz	283 kHz		TP002 V = 4,6V ±1V
IF	4	Ve = 100 mV	450 kHz	450 kHz	TF007	TP011 V = 450 kHz ±1 kHz
MW	5	Gf Ve = 300 µV	630 kHz	630 kHz	TF001	TP007 TP008 max. (TP009G = AGND)
LW	6		170 kHz	170 kHz	TF002	

FM alignment

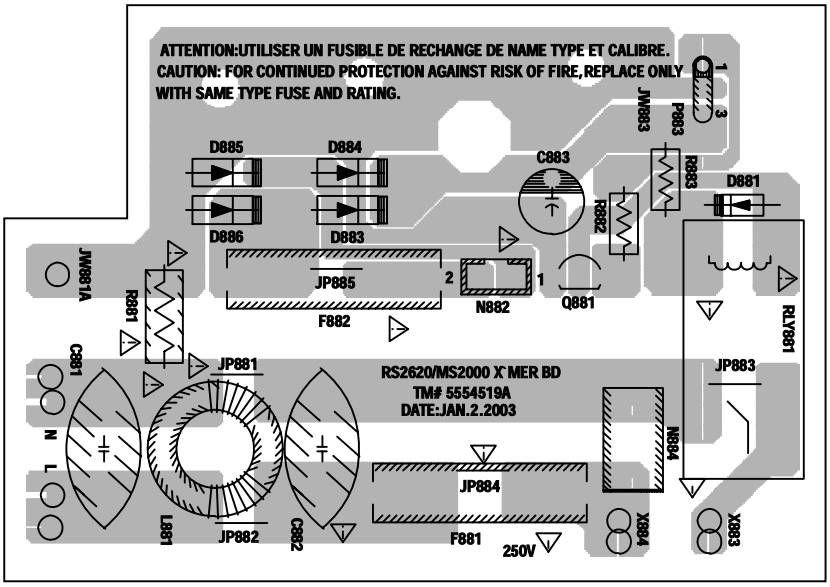
		Gf	f	10888 KHZ		V
IF	1	Gf Ve = 1 mV	98,1 MHz	98,1 MHz	TF006	TP003 (TP009G = AGND) f = 10,7 kHz ±5 kHz 
Osc	2		87,5 MHz	87,5 MHz	L004	TP002 VT = 1,0V ±0,05V
	3		108,1 MHz	108,1 MHz	CV002	VT = 7,0V ±0,5V
RF	4	Gf Ve = 1 mV	90,1 MHz	90,1 MHz	L003	TP007 TP008 max. (TP009G = AGND)
	5		106,1 MHz	106,1 MHz		

Decoder alignment

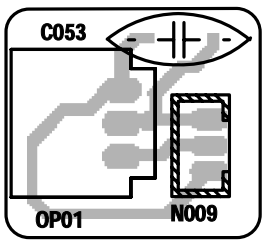
		Gf	f	10888 KHZ		Hz
FM	1	Ve = 1 mV TP010 TP010G	98,1 MHz	98,1 MHz	RV001	TP005 f = 152 kHz ±1 kHz
						TP010G = DGND

Power unit P.C.B.
Platine secteur
Ltpl. Netzanschluss
Piastra di rete
Platina de red

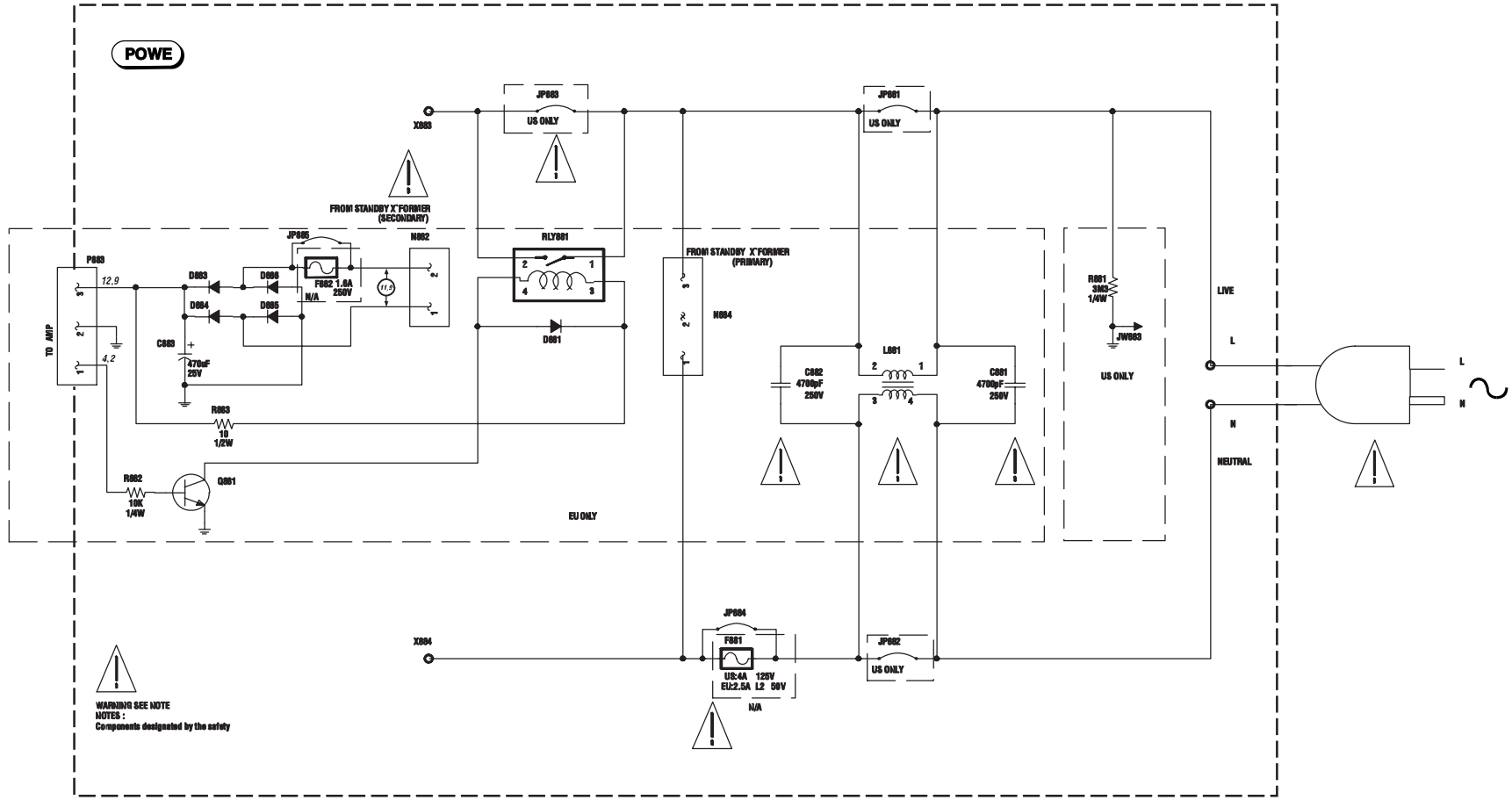
Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes

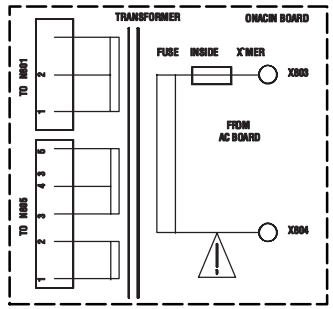


Headphone-jack P.C.B.
Platine prise-casque
Ltpl.Kopfhörerbuchse
Piastra presa per cuffia
Platina toma auriculares



POWER SUPPLY SCHEMATIC DIAGRAM - SCHEMA DE L'ALIMENTATION - SCHALTBILD NETZTEIL - SCHEMA DELL' ALIMENTAZIONE - ESQUEMA DE LA ALIMENTACIÓN

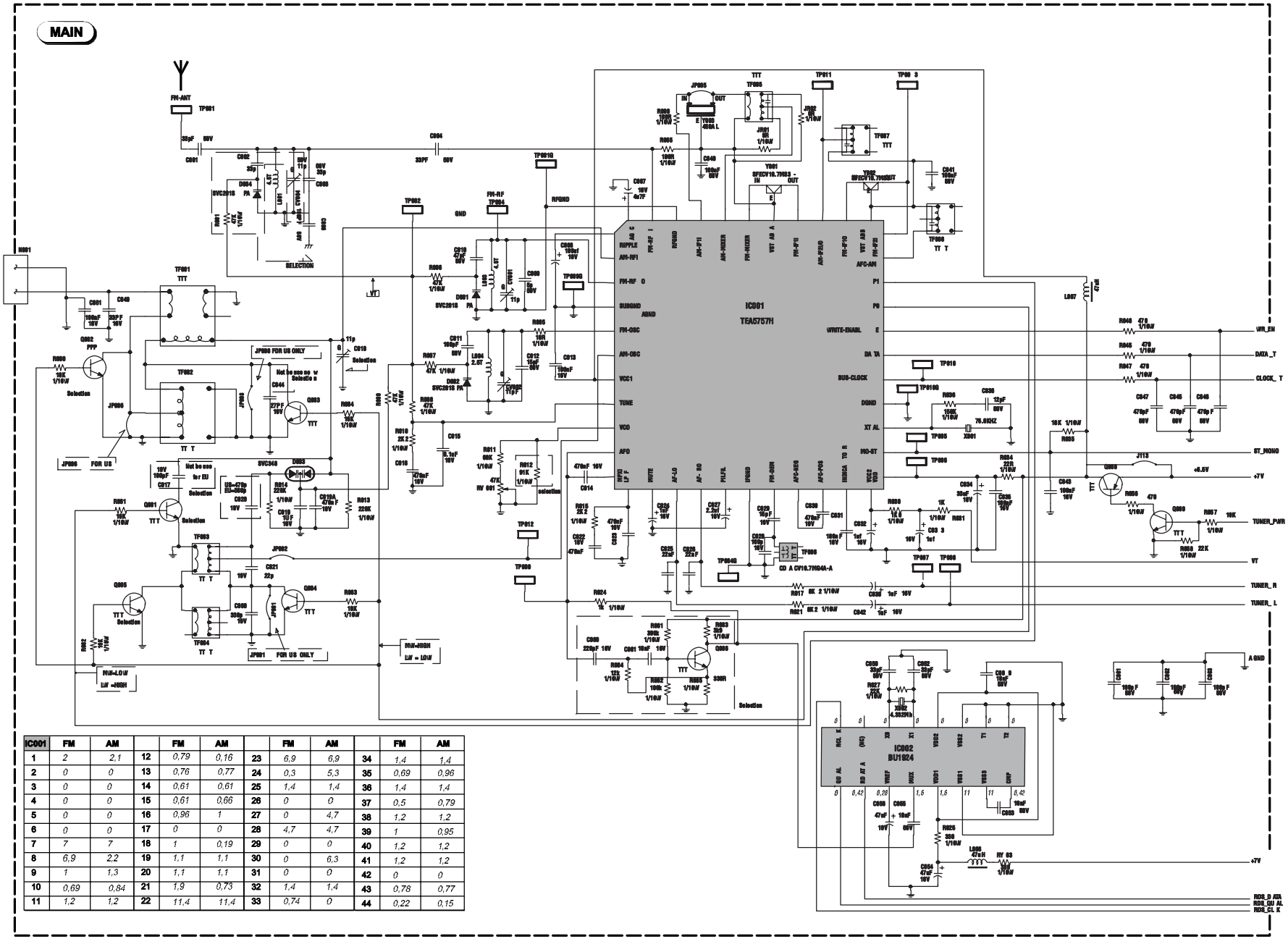




14 V~

12,5 V⎓ 10 MΩ

MAIN SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE PRINCIPALE - SCHALTBILD GRUNDPLATTE - SCHEMA DELLA PIASTRA PRINCIPALE - ESQUEMA DE LA PLATINA PRINCIPAL (TUNER PART) MS 2000 / MS 2005

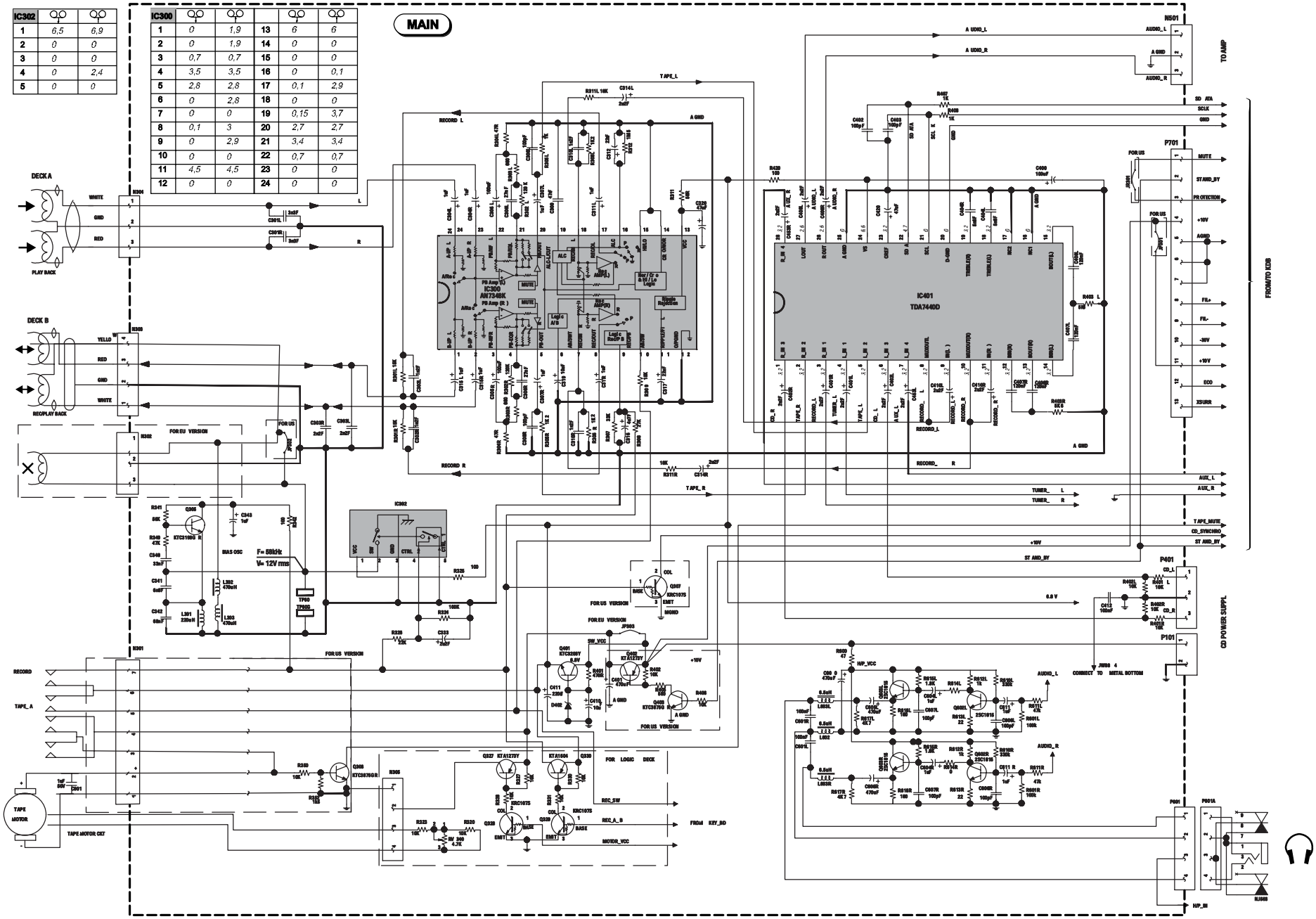


IC001	FM	AM		FM	AM		FM	AM		FM	AM
1	2	2,1	12	0,79	0,16	23	6,9	6,9	34	1,4	1,4
2	0	0	13	0,76	0,77	24	0,3	5,3	35	0,69	0,96
3	0	0	14	0,61	0,61	25	1,4	1,4	36	1,4	1,4
4	0	0	15	0,61	0,66	26	0	0	37	0,5	0,79
5	0	0	16	0,96	1	27	0	4,7	38	1,2	1,2
6	0	0	17	0	0	28	4,7	4,7	39	1	0,95
7	7	7	18	1	0,19	29	0	0	40	1,2	1,2
8	6,9	2,2	19	1,1	1,1	30	0	6,3	41	1,2	1,2
9	1	1,3	20	1,1	1,1	31	0	0	42	0	0
10	0,69	0,84	21	1,9	0,73	32	1,4	1,4	43	0,78	0,77
11	1,2	1,2	22	11,4	11,4	33	0,74	0	44	0,22	0,15

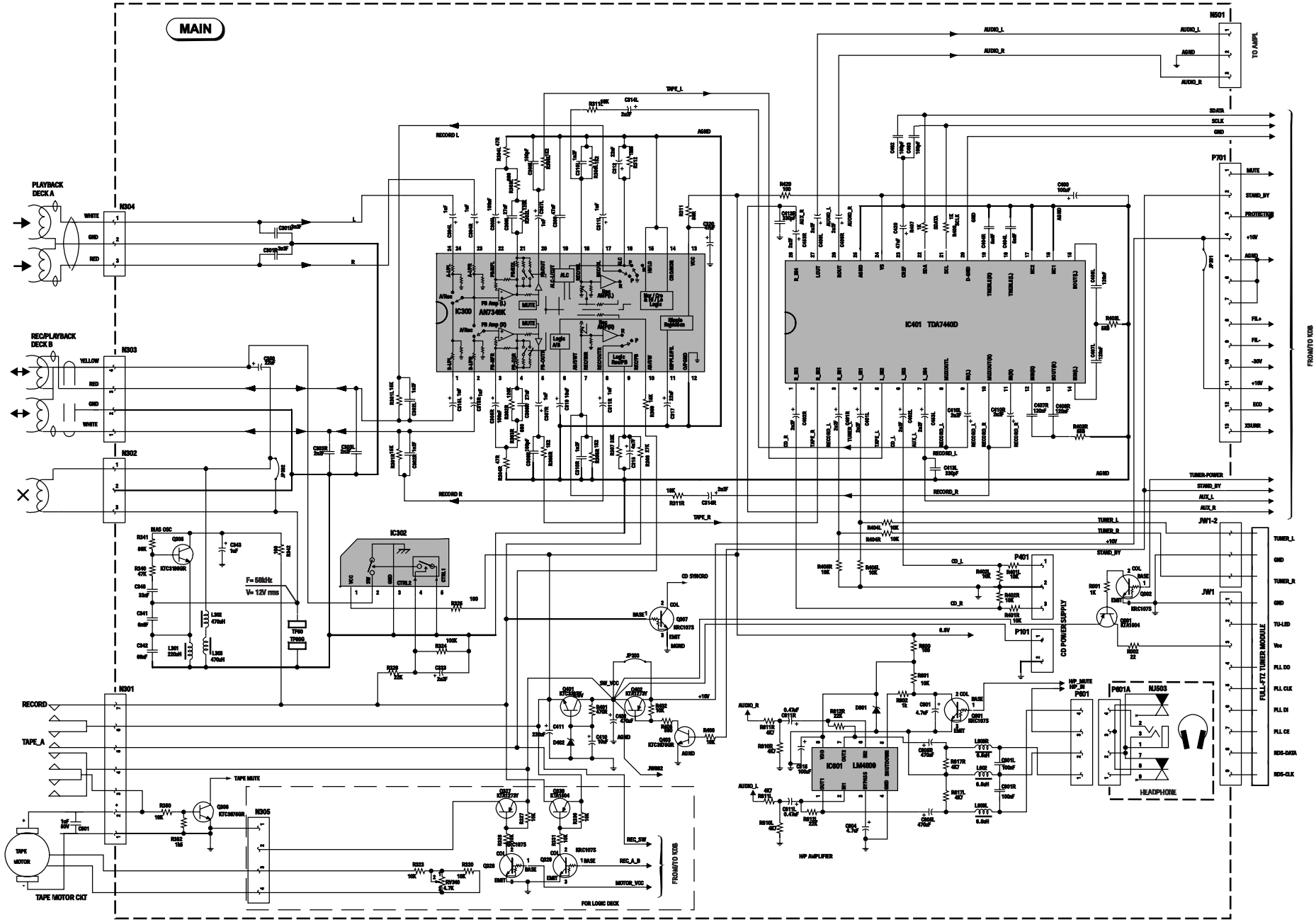
MAIN SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE PRINCIPALE - SCHALTBILD GRUNDPLATTE - SCHEMA DELLA PIASTRA PRINCIPALE - ESQUEMA DE LA PLATINA PRINCIPAL (TAPE PART) MS 2000 / MS 2005

IC302		
1	6,5	6,9
2	0	0
3	0	0
4	0	2,4
5	0	0

IC300					
1	0	1,9	13	6	6
2	0	1,9	14	0	0
3	0,7	0,7	15	0	0
4	3,5	3,5	16	0	0,1
5	2,8	2,8	17	0,1	2,9
6	0	2,8	18	0	0
7	0	0	19	0,15	3,7
8	0,1	3	20	2,7	2,7
9	0	2,9	21	3,4	3,4
10	0	0	22	0,7	0,7
11	4,5	4,5	23	0	0
12	0	0	24	0	0

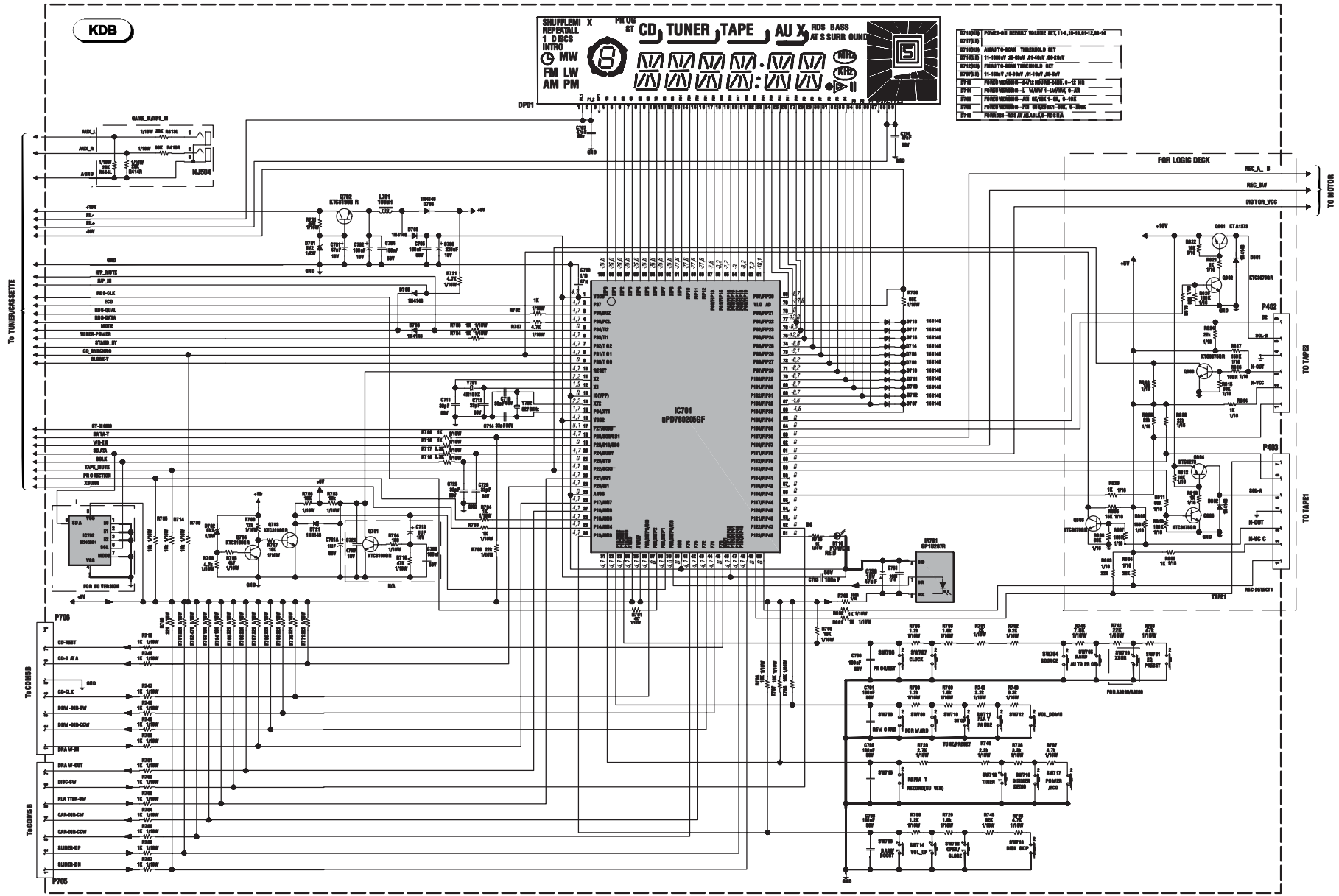


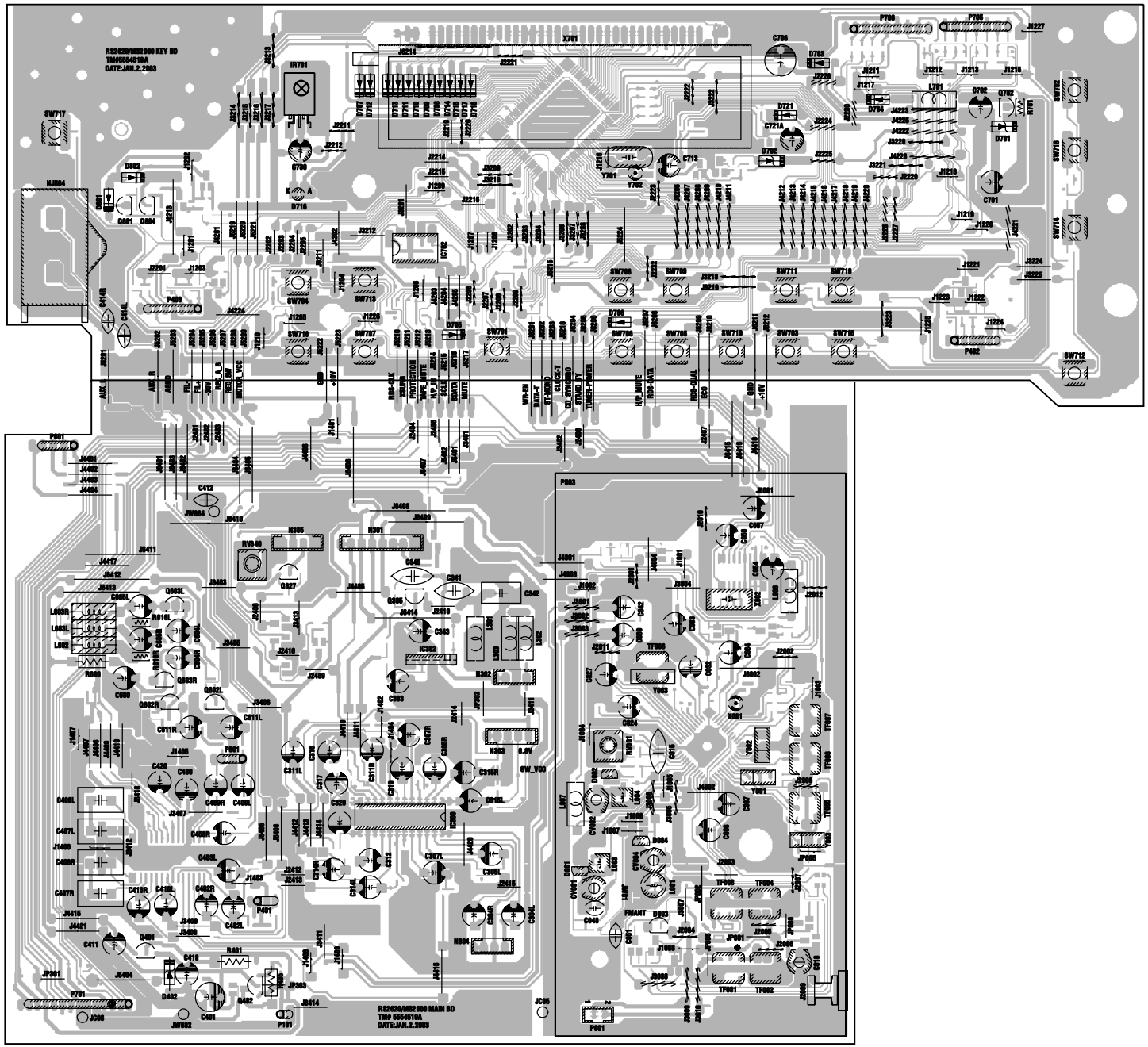
MAIN SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE PRINCIPALE - SCHALTBILD GRUNDPLATTE - SCHEMA DELLA PIASTRA PRINCIPALE - ESQUEMA DE LA PLATINA PRINCIPAL (TAPE PART) MS 2000G



CRKD 2558
First issue 07/03

MAIN SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE PRINCIPALE - SCHALTBILD GRUNDPLATTE - SCHEMA DELLA PIASTRA PRINCIPALE - ESQUEMA DE LA PLATINA PRINCIPAL (KDB PART)

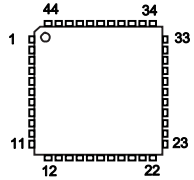




MS 2000
MS 2005

Main P.C.B.
Platine principale
Grundplatte
Piastra principale
Platina principal

Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes



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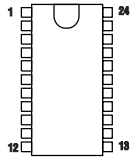
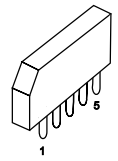


AN7348K



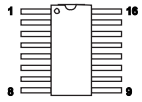
BA7755A

KTA1273Y
KTA966Y
KTC3198GR

KTC3203Y

CRKD 2558
First issue 07/03

Solder side
Côté soudure
Lötseite
Lato saldature
Lado del cobre



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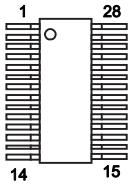
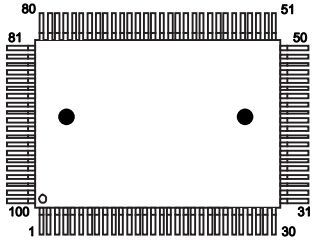


TDA7440D



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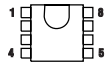

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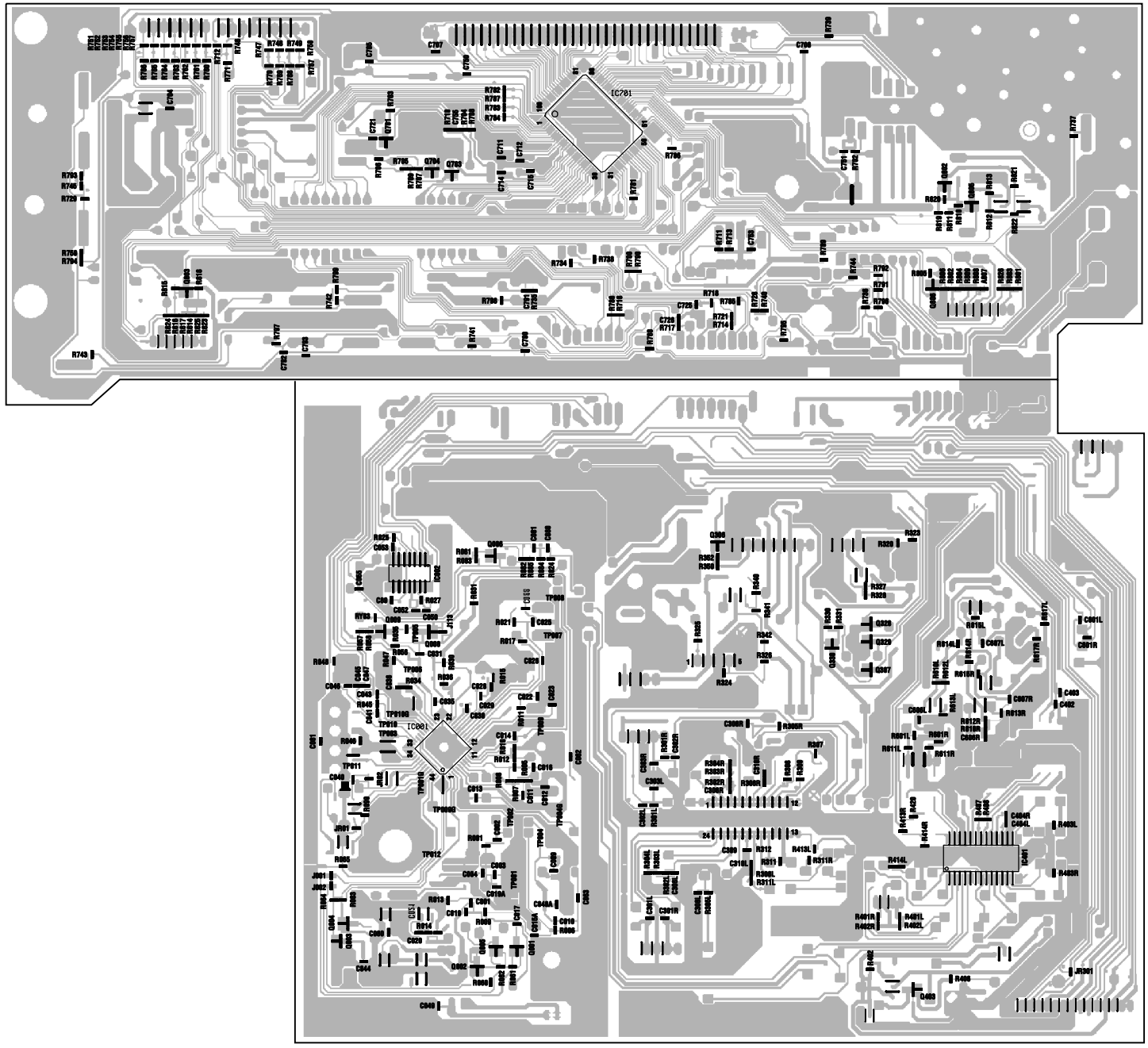
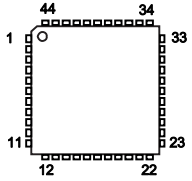


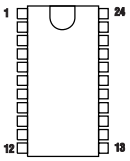
MS 2000G

Main P.C.B.
Platine principale
Grundplatte
Piastra principale
Platina principal

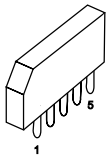
Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes



TEA5757H



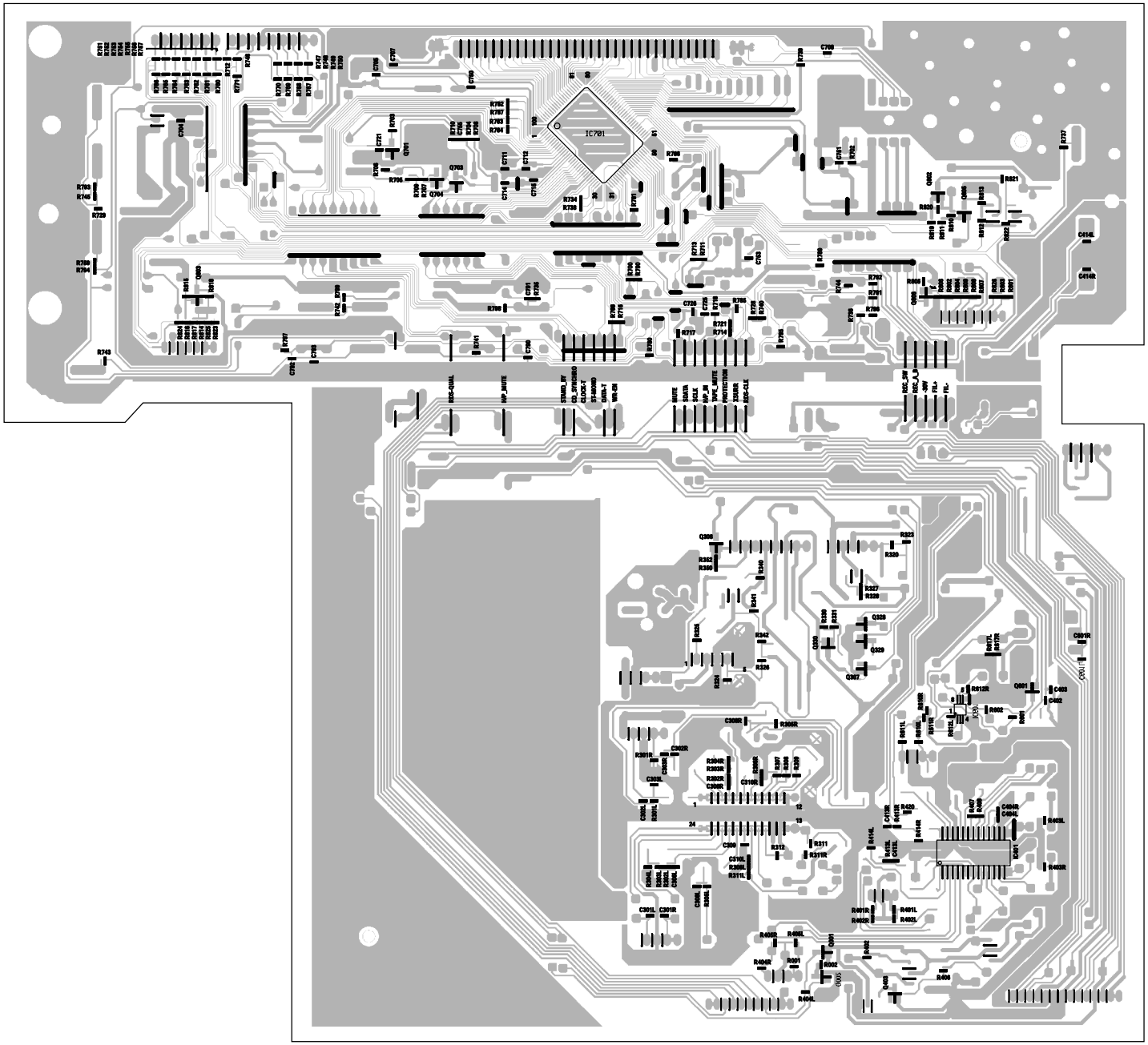
AN7348K

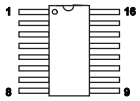


BA7755A

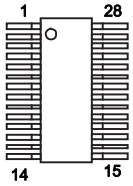
KTC3203Y

Solder side
Côté soudure
Lötseite
Lato saldature
Lado del cobre



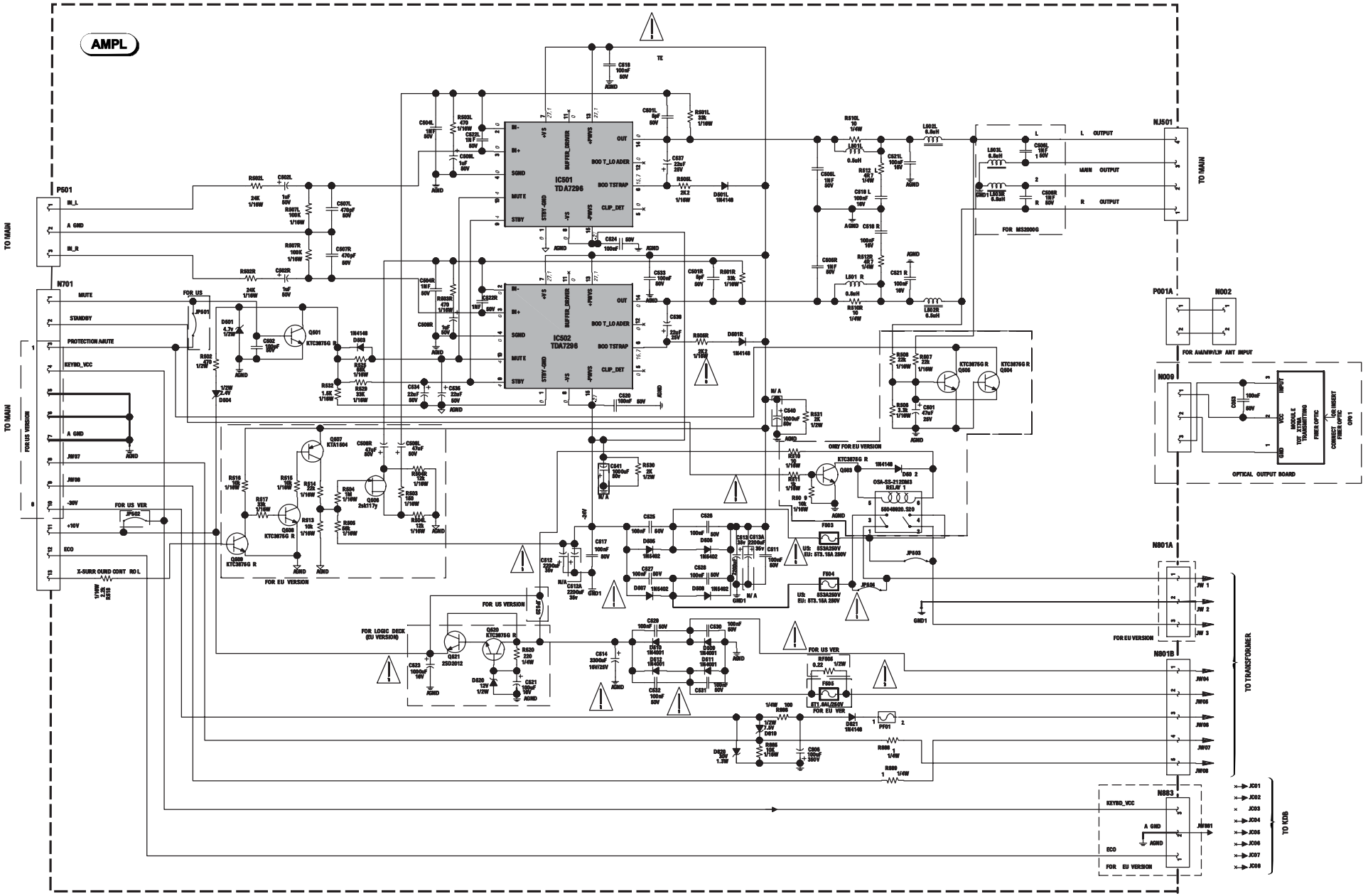


BU1924F



TDA7440D

AMPLIFIER SCHEMATIC DIAGRAM - SCHEMA DE L'AMPLIFICATEUR - SCHALTBILD ENDVERSTÄRKER - SCHEMA DEL AMPLIFICATORE - ESQUEMA DEL AMPLIFICADOR
MS 2000 / MS 2005



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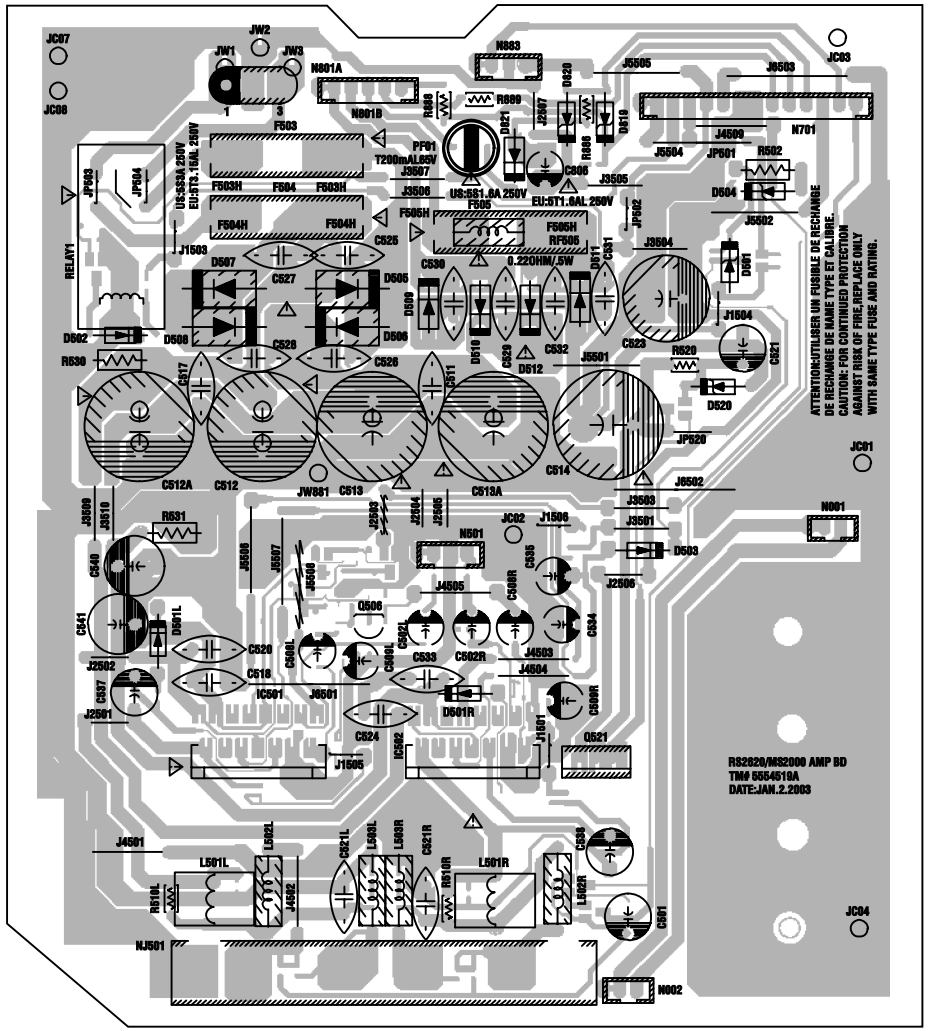
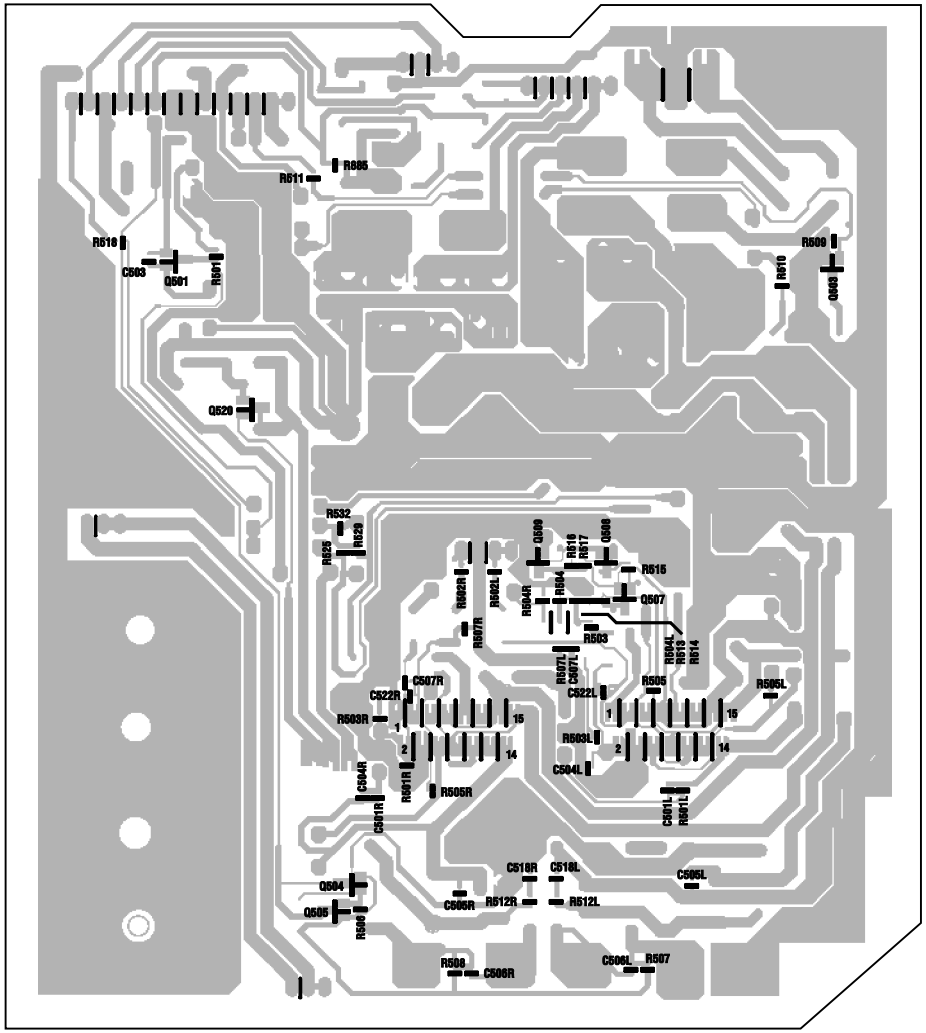
First issue 07/03

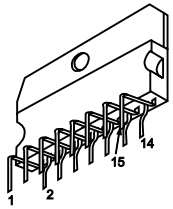
MS2000 **Power supply / amplifier P.C.B.**
MS2005 **Platine alimentation / amplificateur**
Ltpl. Netzteil und Endverstärker
Piastra alimentazione / amplificatore
Platina alimentación / amplificador

Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes

Solder side
Côté soudure
Lötseite
Lato saldature
Lado del cobre


ATTENTION:UTILISER UN FUSIBLE DE RECHANGE DE NAME TYPE ET CALIBRE.
CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,REPLACE ONLY WITH SAME TYPE FUSE AND RATING.
RS2620/MS2000 AMP BD
TM# 5554519A
DATE:JAN.2.2003





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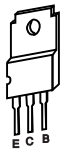
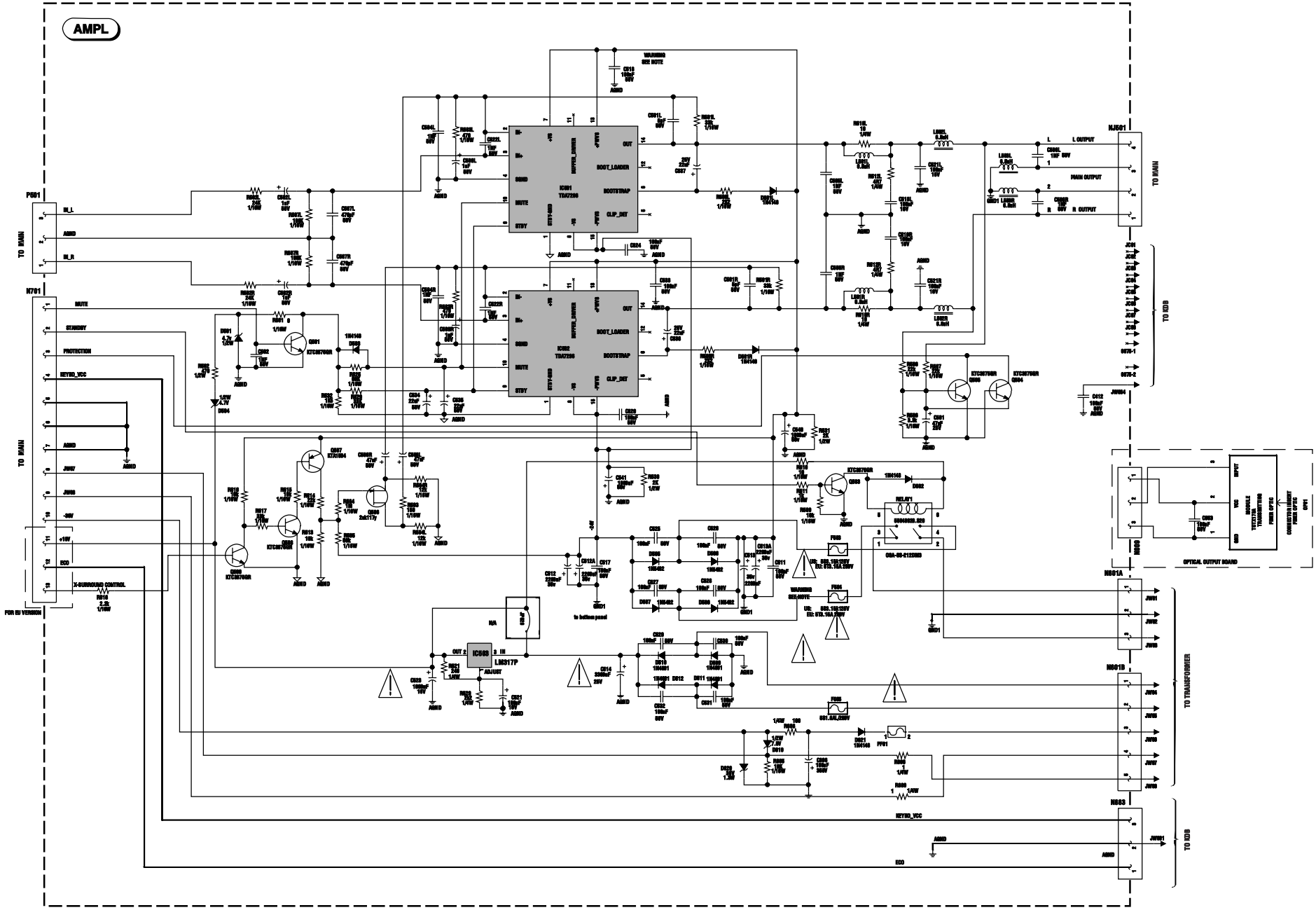


KTA1049
2SD2012

2SK117Y

AMPLIFIER SCHEMATIC DIAGRAM - SCHEMA DE L'AMPLIFICATEUR - SCHALTBILD ENDVERSTÄRKER - SCHEMA DEL AMPLIFICATORE - ESQUEMA DEL AMPLIFICADOR

MS 2000 G



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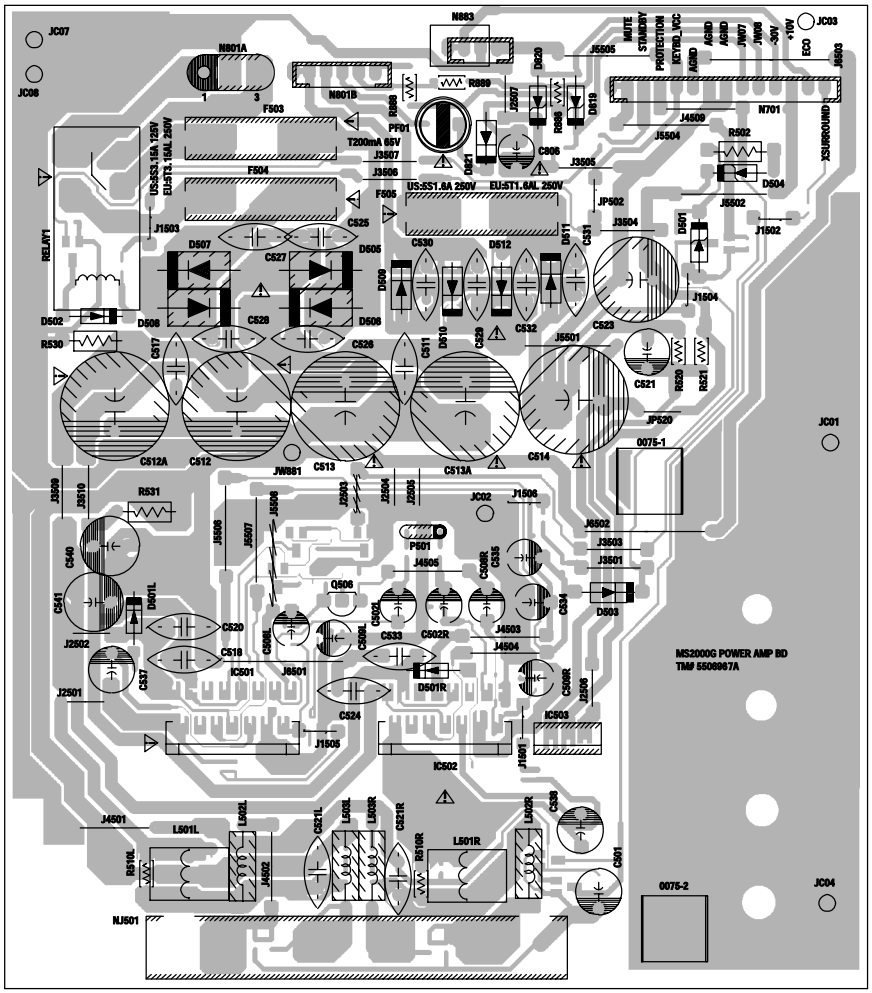
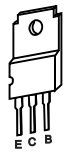
MS 2000G

Power supply / amplifier P.C.B.
Platine alimentation / amplificateur
Ltpl. Netzteil und Endverstärker
Piastra alimentazione / amplificatore
Platina alimentación / amplificador

Component side
Côté composants
Bestückungsseite
Lato componenti
Lado componentes

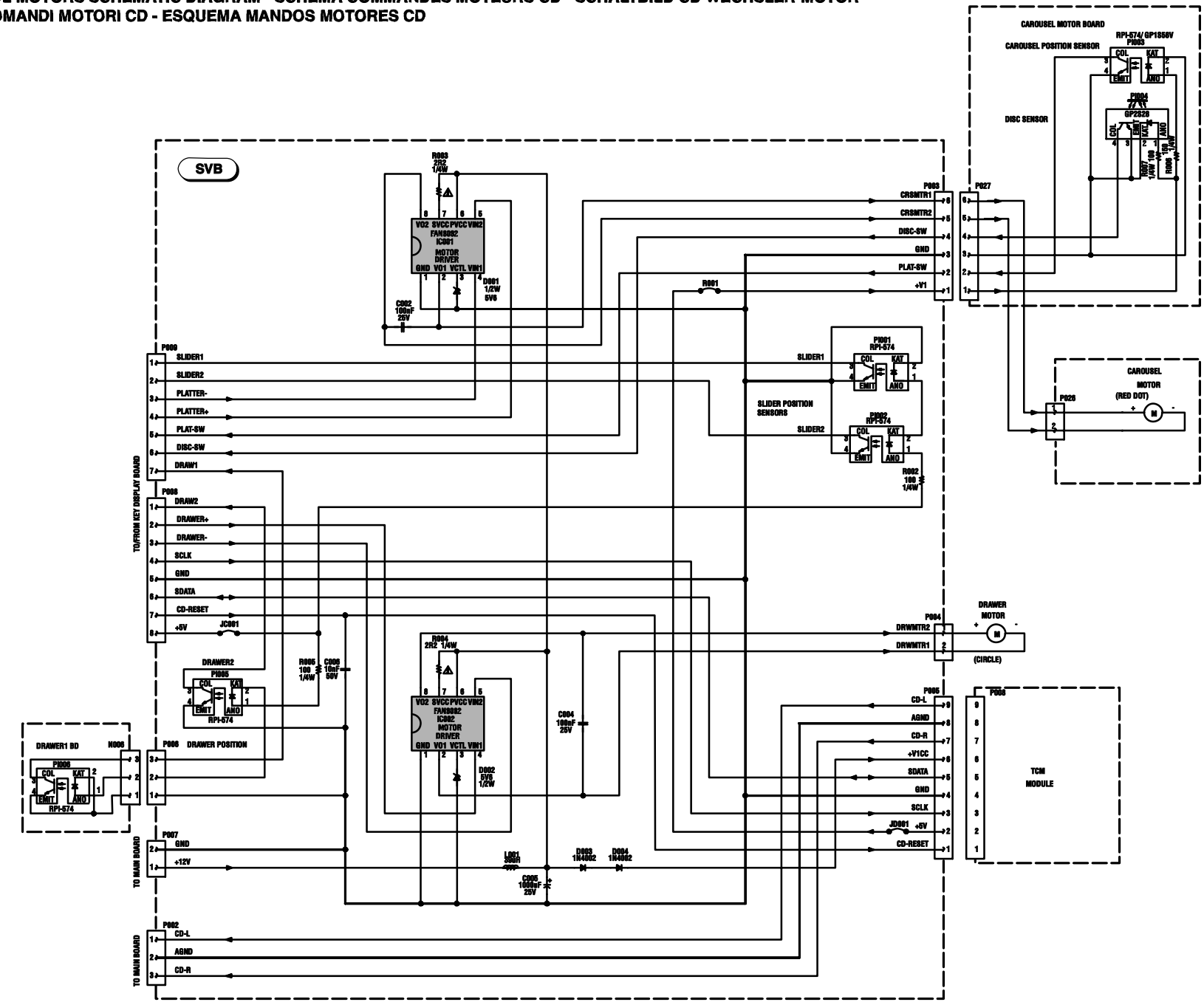
Solder side
Côté soudure
Lötseite
Lato saldature
Lado del cobre





LM317P

CD CONTROL MOTORS SCHEMATIC DIAGRAM - SCHEMA COMMANDES MOTEURS CD - SCHALTBILD CD WECHSLER-MOTOR - SCHEMA COMANDI MOTORI CD - ESQUEMA MANDOS MOTORES CD



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CD motors control P.C.B.
Platine moteurs commandes CD
Ltpl. CD Wechsler-Moteur
Piastra comandi motori CD
Platina de mandos motores CD